Claim Listing

1-24 (Canceled)

25. (Currently Amended) A metering device for providing a layer of coating liquid to a coating apparatus wherein the coating apparatus has a rotatable first roll and a rotatable second roll defining with the first roll a first nip through which a printing substrate passes, comprising:

a. a rotatable third roll having a surface energy;

b. a supply of coating liquid having a surface energy, the supply of coating liquid being in contact with the third roll; and

c. a doctor blade for metering a layer of coating liquid onto the third roll, the doctor blade having a distal edge with a surface energy that contacts the third roll,

wherein the surface energy of a portion of the distal edge adjacent a first end of the doctor blade and a portion of the distal edge adjacent a second end of the doctor blade have a surface energy that is less than the surface energy of the coating liquid ~~wherein the surface energy of at least a portion of the distal edge is less than the surface energy of the coating liquid~~.

26. (Original) The metering device of Claim 25, wherein the surface energy of the coating liquid is between about 30 and about 35 dyne/cm.

27. (Original) The metering device of Claim 25, wherein the surface energy of at least a portion of the distal edge is between about 25 and about 30 dyne/cm.

28. (Original) The metering device of Claim 25, wherein the third roll is substantially cylindrical, comprises a surface, a first end, an opposite second end and a longitudinal length between the first and second ends, and defines with the second roll a second nip.

29. (Original) The metering device of Claim 28, wherein the doctor blade further comprises a first end and an opposite second end, and wherein the distal edge of the doctor blade extends between the first and second ends of the doctor blade and has a longitudinal length.

30. (Original) The metering device of Claim 29, wherein the surface energy of substantially the entire length of the distal edge of the doctor blade is less than the surface energy of the coating liquid.

31. (Canceled)

32. (Currently Amended) The metering device of Claim 25 [[31]], wherein the portions of the distal edge extend at least about 1 cm from the first end of the doctor blade along the longitudinal length thereof and at least about 1 cm from the second end of the doctor blade along the longitudinal length thereof, respectively.

33. (Original) The metering device of Claim 25, wherein the at least a portion of the distal edge comprises a coating of silicone wax having a surface energy that is less than the surface energy of the coating liquid.

34. (Original) The metering device of Claim 25, wherein the at least a portion of the distal edge comprises a fluorocarbon coating having a surface energy that is less than the surface energy of the coating liquid.

35. (Original) The metering device of Claim 25, wherein the at least a portion of the distal edge comprises a coating of Teflon having a surface energy that is less than the surface energy of the coating liquid.

36. (Currently Amended) A metering device for providing a layer of coating liquid to a coating apparatus wherein the coating apparatus has a rotatable first roll and a rotatable second roll defining with the first roll a first nip through which a printing substrate passes, comprising:

a. a rotatable third roll having a surface energy;
b. a supply of coating liquid having a surface energy, the supply of coating liquid being in contact with the third roll; and

c. a doctor blade for metering a layer of coating liquid onto the third roll, the doctor blade having a distal edge with a surface energy that contacts the third roll,

wherein the surface energy of a portion of the surface of the third roll adjacent a first end thereof and a portion of the third roll adjacent a second end thereof have a surface energy that is less than the surface energy of the coating liquid ~~wherein the surface energy of at least a portion of the third roll is less than the surface energy of the coating liquid~~.

37. (Original) The metering device of Claim 36, wherein the surface energy of the coating liquid is between about 30 and about 35 dyne/cm.

38. (Original) The metering device of Claim 36, wherein the surface energy of the at least a portion of the third roll is between about 25 and about 30 dyne/cm.

39. (Original) The metering device of Claim 36, wherein the third roll is substantially cylindrical, comprises a surface, a first end, an opposite second end and a longitudinal length between the first and second ends, and defines with the second roll a second nip.

40. (Original) The metering device of Claim 39, wherein the doctor blade further comprises a first end and an opposite second end, and wherein the distal edge of the doctor blade extends between the first and second ends of the doctor blade and has a longitudinal length.

41. (Original) The metering device of Claim 40, wherein the surface energy of substantially the entire surface of the third roll is less than the surface energy of the coating liquid.

42. (Canceled)

43. (Currently Amended) The metering device of Claim 36 [[42]], wherein the portions of the surface of the third roll extend at least about 1 cm from the first end of the third roll along the

longitudinal length thereof and at least about 1 cm from the second end of the third roll along the longitudinal length thereof, respectively.

44. (Original) The metering device of Claim 36, wherein the at least a portion of the distal edge comprises a coating of silicone wax having a surface energy that is less than the surface energy of the coating liquid.

45. (Original) The metering device of Claim 36, wherein the at least a portion of the distal edge comprises a fluorocarbon coating having a surface energy that is less than the surface energy of the coating liquid.

46. (Original) The metering device of Claim 36, wherein the at least a portion of the distal edge comprises a coating of Teflon having a surface energy that is less than the surface energy of the coating liquid.